

A Sustainable Facility for a Sustainable Agency

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NOAA's Mission

To describe and predict changes in the Earth's environment, and conserve and wisely manage the Nation's coastal and marine resources



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NOAA's five line offices:

- National Weather Service (NWS)
- National Marine Fisheries Service (NMFS)
- National Ocean Service (NOS)
- National Environmental Satellite, Information and Data Service (NESDIS)
- NOAA Research

NMFS's Mission in Hawaii

Administer domestic and international programs supporting the conservation and management of marine fisheries and protected marine species in the central and western Pacific



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Need for the Project

- Inadequate facility to support legislatively mandated fisheries management
- Relieve overcrowding and accommodate approved project growth
- Interrelated functions need to be consolidated to optimize performance
- Not compliant with ADA or UFAS requirements or current building codes

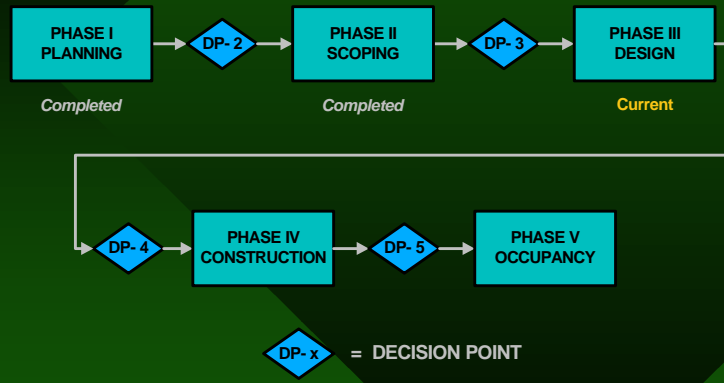


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- Not suitable for conducting modern research (i.e., one bio-chemistry lab & makeshift necropsy lab)
- Limited potential for modern communications & technology
- Two pre-engineered metal annexes, with asbestos panels, built in early 1950s
- Overcrowded - only 33,000 square feet for 120 people
- Not compliant with the American's with Disabilities Act (ADA)
- Not compliant with current building codes

NOAA's PDAM* Process



* Project Development, Approval, and Management



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Initial Concept Design



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Organizational Challenges

- Management's unfamiliarity with various Executive Orders, design concepts, etc.
- Concerns regarding increased project costs with limited, if any, benefits
- No funding to support/evaluate initiatives (*except at DOC level*)
- Misperceptions about lack of quality control if implemented



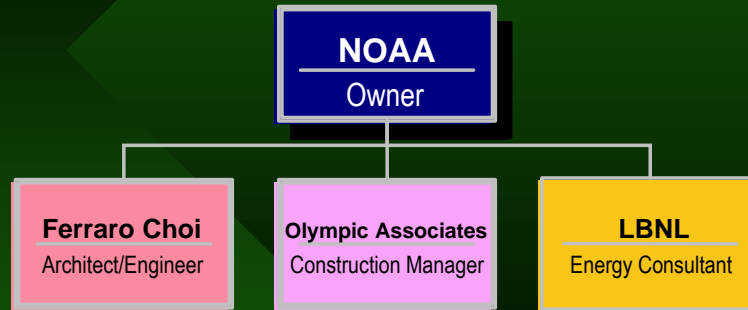
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•Executive Order 13101, "Greening the Government Through Waste Prevention, Recycling, and Federal Acquisition" directs Federal agencies to use recycled content and environmentally preferable products. The Executive Order directs agencies to consider a broad range of environmental factors in developing plans, drawings, work statements, specifications, or other product descriptions. These factors include waste prevention; recyclability, the use of recycled content, environmentally preferable, and biobased products; life cycle cost; and ultimate disposal

•Executive Order 13123, "Greening the Government Through Efficient Energy Management," directs Federal agencies to apply the principles of Sustainable Design to the siting, design and construction of new facilities. The Executive Order also directs agencies to optimize life-cycle costs, reduce pollution prevention and other environmental and energy costs associated with the construction, life-cycle operation, and decommissioning of facilities. Executive Order 13123 Guidance Documents, drafted by special working groups convened by the Interagency Energy Management Task Force, were created to help agencies meet the goals of Executive Order 13123

HLRP Team



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FEMP Design Assistance

- Review of Statements of Work & Design Phase Objectives for energy conservation & sustainability
- Technical reviews at all design phase milestones
- Training & educational materials



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Design Phase Objectives

- Definition of “World Class Facility” & how it can be accomplished within the established budget
- Degree of incorporating Sustainable Design, i.e., LEED Building Gold™ rating
- Development & implementation of an energy budget for design
- Degree of specifying Energy Star® equipment and materials



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DOE assisted in the development and refinement of these four Design Phase Objectives – taken from the Architect/Engineer Facility Design Statement of Work

Technical Reviews

- Participation at initial Design Charettes
- Reviews at Schematic Design, Design Development, and Construction Documents subphases
- Development of Design Metrics



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Training & Educational Materials

- Operations & Maintenance Management Workshop
- Laboratories for the 21st Century (Pilot Program Partner)
- Building Commissioning Guide
- Energy 2001 conference (June 2001)



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Results



- Progressing towards the LEED Building Gold™ rating
 - 1st federal laboratory
 - 1st facility in Hawaii
- Progressing towards Energy Star® building designation
- Potential energy rebates from HECO



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Revised “Sustainable” Design



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Lessons Learned



- Every project needs a champion
- Clearly communicate the goals & objectives and obtain sponsor's approval
- Many obstacles and challenges to overcome – both externally & internally
- Delayed gratification – aesthetically appealing, energy efficient facility



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Mahalo to HLRP Partners

- Mike Holda – LBNL
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- Dale Sartor – LBNL
- Phil Wirdzek – EPA
- Jim Woods – DOC
- Eileen Yoshinaka – DOE



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